Supplemental Response of
Wisconsin Power and Light Company
to
The Public Service Commission of Wisconsin
Data Request No. 3.22 – SECOND SUPPLEMENTAL

Docket Number:	05-CE-137
Date of Request:	March 11, 2009
Information Requested By:	Ken Detmer
Date of Original Response:	March 23, 2009
Date of Second Supplemental Response:	May 1, 2009
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Witness: (If other than Author)	

Data Request No. 3.22:

Provide updated EGEAS analysis without NED 3 and consideration of the other changes discussed during the latest technical discussion between staff and WP&L modeling experts.

Second Supplemental Response:

WPL is hereby supplementing its response to Commission Data Request No. 3.22. Confidential Data is highlighted in yellow

After the updated EGEAS runs submitted in response to Public Service Commission of Wisconsin Data Request No. 3.22 were distributed in accordance with the Notice of Technical Conference (PSC Ref #: 110520), WPL's EGEAS modelers identified an error in the data. Upon discovering this item, WPL decided to conduct a full internal audit of its updated EGEAS data entries used to produce the EGEAS runs submitted in response to the Public Service Commission of Wisconsin Data Request No. 3.22. As a result of this audit, WPL has identified the items listed below. WPL will address each item as noted and update its EGEAS modeling runs.

Planned Corrections to EGEAS Runs
Submitted in Response to Data Request No. 3.22

1	Generation Unit	Edgewater Unit 5 specifications in Plans 1 and 3
	Error	The current full-load heat rates for the Edgewater Unit 5 specifications in Plans 1 and 3 are miss-stated. . .
	Remedy	New values have been calculated and will be entered into the model
2	Generation Unit	Edgewater Unit 5 Variable O&M Specification in Plan 3
	Error	Variable O&M costs specified for the SCR, Bag House, and Scrubber emission control combination omitted the ▬▬▬ ▬▬ component in the costs.

	Remedy	Variable O&M costs specified for the SCR, Bag House, and Scrubber emission control combination was recalculated to include the ▓▓▓▓▓▓▓▓▓ component in the costs.
3	Generation Unit	Base 150 Economy off system purchase (existing proxy resource)
	Error	In response to a PSCW staff request to represent emission rates for off-system purchases more in line with reality, the SO_2 emissions rate for the unit was incorrectly calculated from the CO_2 emission rate for coal units, from the EGRIDS data base, rather than from the SO_2 emission rate for coal units.
	Remedy	Recalculate the SO_2 emissions rate, from the EGRIDS data base, by using the SO_2 emission rate for coal units.
4	Generation Unit	Rock River 6 (existing resource)
	Error	The fuel cost trajectory needs for 2008 to 2009 was incorrectly entered as
	Remedy	Revise the fuel cost trajectory for 2008 to 2009 to be ▓▓▓▓▓.
5	Generation Unit	Green Field Coal unit (GREENF PC 50%JOU, planning alternative)
	Error	In the EGEAS runs provided in response to PSCW DR 3.22, coal and natural gas price forecasts were updated. In this process, the coal price forecast for this unit was neglected.
	Remedy	Update the coal price forecast for this unit by using 2006 IRP method to calculate an ▓▓▓▓▓▓▓▓▓▓▓▓▓ ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓ ▓▓▓▓▓.
6	Generation Unit	Othr 250 Economy (existing proxy resource)
	Error	The fuel cost escalator for this unit is designed to blend the projected ▓▓▓▓▓▓▓▓▓▓ forecast and the ▓▓▓▓▓ ▓▓▓ forecast. However, ▓▓▓▓▓▓▓▓▓ ▓▓▓▓▓▓▓▓.
	Remedy	The escalator should ▓▓▓▓▓▓▓▓▓ ▓▓▓▓▓▓▓▓▓▓▓▓.
7	Generation Unit	Generic CT (New CT 153 MW, planning alternative)
	Error	The cumulative minimum tunnel constraints set for this unit ▓▓▓▓ ▓▓▓▓▓▓▓.
	Remedy	Remove the cumulative minimum tunnel constraints for this unit.
8	Generation Unit	Other generic planning alternative units
	Concern	The number of units allowed for consideration may produce too many feasible states thereby jeopardizing the possibility of optimal solutions.
	Remedy	Set the tunnel constraints for the IGCC GEQU 60% unit as ▓▓▓▓▓▓▓▓▓▓.
	Remedy	Set the tunnel constraints for the NEW BIOMASS 300 unit as ▓▓▓▓▓▓▓▓▓▓.
	Remedy	Set the tunnel constraints for the NEW CC 264MW unit as ▓▓▓▓▓▓▓.
9	Generation Unit	NED Units 1 & 2
	Error	The variable O&M for emission control costs ▓▓▓▓▓▓▓ ▓▓▓▓▓▓ production.
	Remedy	Use the re-calculated unit variable O&M emission control costs ▓▓▓▓▓▓▓ production.
10	Generation Unit	Crystal Lake PPA (new committed resource)
	Error	The Crystal Lake wind PPA was specified as having a ▓▓▓▓▓

		▮▮▮▮▮▮▮▮▮▮▮▮
	Remedy	The Crystal Lake wind PPA ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ ▮▮▮▮▮▮▮▮▮▮. Therefore, the ▮▮▮▮▮▮▮▮▮▮▮▮▮ must be eliminated.
11	Generation Unit	New Biomass Unit (NEWBIOMASS 300MW, planning alternative)
	Error	In Plan 1, Future Scenario 4, the coal fuel cost was supposed to be increased by 30 percent. This should have resulted in a Fuel cost for Plan 1, Future Scenario 4 of ▮▮▮▮/MBTU, a value of ▮▮▮▮/MBTU was entered.
	Remedy	This was a numeric transposition error isolated to one case. Caution needs to be taken when entering all data.
	Error	The unit has not been specified as a ▮▮▮▮▮▮▮▮
	Remedy	Specify the unit as a ▮▮▮▮▮▮▮.
	Error	The Blended fuel uses ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮
	Remedy	Use the ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮
12	Generation Unit	Edgewater Unit 5, SCR installed in 2011
	Error	The fixed O&M trajectory, reference number ▮▮▮▮▮▮▮▮▮, ▮▮▮▮▮▮▮▮▮▮▮▮
	Remedy	Enter a value of ▮▮▮% for the fixed O&M trajectory, reference number ▮▮▮▮▮▮▮.
13	Generation Unit	Nelson Dewey (NED) 1 and 2, existing units
	Error	The variable O&M, trajectory reference numbers ▮▮▮▮▮▮▮ ▮▮▮▮▮▮▮▮▮▮▮▮
	Remedy	Enter a value of ▮▮▮▮ for the variable O&M trajectory, reference numbers ▮▮▮▮▮▮▮▮▮.
14	Generation Unit	Nelson Dewey (NED) 1, existing unit
	Error	The fuel cost trajectory, reference number ▮▮▮▮▮▮▮▮▮▮ ▮▮▮▮▮▮
	Remedy	Enter a value of ▮▮▮▮ for the fuel cost trajectory, reference number ▮▮▮▮▮▮
15	Input Variable	Unserved Energy
	Error	Excluded revisions to unserved energy escalator in Future Scenarios 3, 4, 5, and 6.
	Remedy	Include revisions to unserved energy escalator in Future Scenarios 3, 4, 5, and 6.
16	Input Variable	Fuel costs under Future Scenario 6, Carbon Constrained Future B
	Error	In Future Scenario 6, Carbon Constrained Future B, natural gas and coal fuel cost price changes were intended to occur in 2014. However, they followed the commencement of the carbon monetization schedule in Future Scenario 5, Carbon Constrained Future A, which is 2015.
	Remedy	In Future Scenario 6, Carbon Constrained Future B, natural gas and coal fuel cost price changes should reflect their respective changes in 2014.
17	Input Variable	Emission allowance costs and credits
	Concern	By specifying the emission cost and credits trajectories using escalators rather than multipliers in the EDIT module, the economic unit dispatch in years prior to the intended commencement of the emissions monetization is affected, when

		combined with certain settings in the CANAL module.
	Remedy	Specify the effected emission cost and credit trajectories using multipliers.